

BEFORE THE
PUBLIC SERVICE COMMISSION
OF SOUTH CAROLINA

Application of Duke Energy Carolinas, LLC
for Approval of Energy Efficiency Plan Including an
Energy Efficiency Rider and Portfolio of Energy
Efficiency Programs

COVER SHEET

DOCKET
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<input type="checkbox"/> Water/Sewer	<input type="checkbox"/> Expedited Consideration	<input type="checkbox"/> Proposed Order	<input checked="" type="checkbox"/> Other: Rebuttal Testimony: Charles Cicchetti
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BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 2007-358-E

In re:)
Application of Duke Energy Carolinas, LLC) REBUTTAL TESTIMONY OF
For Approval of Energy Efficiency Plan) CHARLES J. CICHETI FOR
Including an Energy Efficiency Rider and) DUKE ENERGY CAROLINAS
Portfolio of Energy Efficiency Programs)
)

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TO THE COMMISSION IN ACCORDANCE WITH ITS
ELECTRONIC FILING INSTRUCTIONS.***

1 **Q. PLEASE STATE YOUR NAME, ADDRESS, AND EMPLOYER.**

2 A. My name is Charles J. Cicchetti, and my business address is 301 North Lake
3 Avenue, Suite 330, Pasadena, CA 91101. I am a co-founder and member in Pacific
4 Economic Group, L.L.C., which specializes in economic and financial consulting
5 with particular attention to energy and environmental regulation.

6 **Q. DO YOU HOLD ANY OTHER POSITIONS?**

7 A. I was previously the Jeffrey J. Miller Chair in Government, Business, and the
8 Economy at the University of Southern California (USC). I resigned that position in
9 2006 and continue to teach part time as an adjunct professor at USC.

10 **Q. PLEASE STATE BRIEFLY YOUR EDUCATION, BACKGROUND, AND**
11 **PROFESSIONAL AFFILIATIONS.**

12 A. I attended the United States Air Force Academy, and I received a B.A. degree in
13 Economics from Colorado College in 1965 and a Ph.D. degree in Economics from
14 Rutgers University in 1969. From 1969 to 1972, I engaged in post-doctoral research
15 on energy and environmental matters at Resources for the Future. Much of my
16 research had dealt with regulation, energy and environmental issues. I have also
17 been a member of various Boards throughout my career, which are set forth in my
18 curriculum vitae, which is attached as Cicchetti Rebuttal Exhibit No. 1.

19 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL BACKGROUND AND**
20 **EXPERIENCE.**

21 A. After my post-doctorate research at Resources For the Future, I took two positions.
22 I served as the Environmental Defense Fund's (now Environmental Defense) first
23 economist from 1972 to 1975, and became a faculty member at the University of

1 Wisconsin Madison from 1972 to 1985, ultimately earning the title of Professor of
2 Economics and Environmental Studies. I left my work at the Environmental
3 Defense Fund to serve as the Director of the Wisconsin Energy Office and as
4 Special Energy Counselor for the Governor in 1975 and 1976. In 1977, I was
5 appointed as Chairman of the Public Service Commission of Wisconsin and held
6 that position until 1979, and served as a Commissioner until 1980. I left the
7 Commission in mid-1980 to return to the University of Wisconsin and also to co-
8 found the Madison Consulting Group, which was sold to Marsh & McLennan
9 Companies in 1984. I became Senior Vice President of National Economic
10 Research Associates and held that position until 1987. From 1987 until 1990, I
11 served as Deputy Director of the Energy and Environmental Policy Center at the
12 John F. Kennedy School of Government at Harvard University, and from 1988 to
13 1992, I was a Managing Director and ultimately Co-Chairman of the economic and
14 management consulting firm, Putnam, Hayes & Bartlett, Inc. In 1992, I formed and
15 became the Managing Director of Arthur Andersen Economic Consulting, a division
16 of Arthur Andersen, LLP. In late 1996, I left Arthur Andersen to co-found Pacific
17 Economics Group, L.L.C.

18 **Q. HAVE YOU TESTIFIED PREVIOUSLY BEFORE UTILITY**
19 **REGULATORY COMMISSIONS?**

20 A. Yes. I have testified before most of the State Utility Regulatory Commissions in the
21 U.S. I have also testified on numerous occasions before the Federal Energy
22 Regulatory Commission, the National Energy Board and many provincial utility

1 regulatory commissions in Canada. I also provided expert advice on energy,
2 environment, and regulatory policies in many other nations.

3 **Q. I SHOW YOU WHAT HAS BEEN MARKED AS CICCHETTI REBUTTAL**
4 **EXHIBIT NO. 1. WOULD YOU PLEASE TELL US WHAT IT IS?**

5 A. Yes. Cicchetti Rebuttal Exhibit No. 1 includes a list of my publications on energy
6 and environmental issues, public utility regulation, competition and antitrust.
7 Exhibit 1 also includes a list of the proceedings in which I have provided expert
8 testimony.

9 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

10 A. The purpose of my rebuttal testimony is to respond on behalf of Duke Energy
11 Carolinas, LLC (“Duke Energy Carolinas” or the “Company”) to portions of the pre-
12 filed direct testimony of David Nichols and James B. Atkins on behalf of
13 Environmental Defense, the South Carolina Coastal Conservation League, and
14 Southern Alliance for Clean Energy (“SACE”) and the Southern Environmental
15 Law Center. Specifically, I will respond to issues these intervenors raise that pertain
16 to Duke Energy Carolinas’ Energy Efficiency Plan or save-a-watt approach and why
17 I believe that the Company’s proposal is an innovative approach that is designed to
18 succeed. In response to Dr. Nichols’ and Dr. Atkins’ testimony, I will explain how,
19 despite twenty years of regulatory discussion of utility-sponsored conservation,
20 efforts have often largely failed to last and more recently, have in fact declined. I
21 will also explain my opinion that Duke Energy Carolinas’ Energy Efficiency Plan
22 offers significant benefits to customers, which I will describe. In short, I explain

1 why Duke Energy Carolinas' save-a-watt approach has the potential to become a
2 national model to incentivize utilities to expand energy efficiency aggressively in
3 both traditionally regulated and restructured markets.

4 **Q. HAVE YOU REVIEWED THE MATERIALS AND INFORMATION FILED**
5 **REGARDING DUKE ENERGY CAROLINAS' PROPOSED ENERGY**
6 **EFFICIENCY PLAN?**

7 A. Yes. I have reviewed Duke Energy Carolinas' Proposed Energy Efficiency Plan
8 filed in this Docket, as well as the direct testimony filed by Duke Energy Carolinas
9 and the intervenors.

10 **Q. IN DR. NICHOLS' TESTIMONY, HE CRITICIZES DUKE ENERGY**
11 **CAROLINAS' PROPOSED ENERGY EFFICIENCY APPROACH AS**
12 **"FUNDAMENTALLY FLAWED." DO YOU AGREE WITH DR.**
13 **NICHOLS' GENERAL ASSESSMENT OF THE COMPANY'S PROPOSAL?**

14 A. No, I do not agree with Dr. Nichols. In fact, I conclude that Duke Energy Carolinas'
15 energy efficiency proposal has been designed to actually succeed where past efforts
16 have largely failed to sustain after public support wanes. The plan's seminal
17 breakthrough is to allow the utility to earn money from a new utility service that
18 helps Duke Energy Carolinas' customers reduce energy use. This makes energy
19 efficiency both an input, and a resource, and a new profit regulated service that
20 would, if encouraged, become a core utility business. This is a paradigm shift that
21 creates a new hybrid regulatory business model that, I believe, will sustain energy
22 efficiency efforts. Duke Energy Carolinas has a difficult task, in part, because it has

1 relatively low (approximately 20 percent below the national average) utility prices.
2 States with higher prices, such as California with prices more than double other
3 states, have had and continue to have something of an advantage when they
4 encourage consumers to participate in Energy Efficiency programs. Economic
5 theory and business marketing suggest that if a near substitute costs more (*e.g.*, the
6 regulated price of electricity) it should be easier to sell a lower-priced and cost-
7 effective substitute (*e.g.*, energy efficiency services and products).

8 The Company's approach helps Duke Energy Carolinas and its retail
9 customers to find a profitable balance between electricity (KWH) and economic
10 efficiency. The Company does this in a manner that levels the playing field for
11 conservation earnings, making aggressive pursuit of energy efficiency programs a
12 sustainable and growing reality for states with low cost electricity, like South
13 Carolina.

14 A second concept in the save-a-watt plan is both simple and very important.
15 Duke Energy Carolinas uses traditional cost-of-service regulation to establish utility
16 earnings on conservation. By this, I mean that the avoided costs of supply-side
17 alternatives are the basis for the save-a-watt plan's ratemaking. The two ideas come
18 together because Energy Efficiency is both an input, or "fifth-fuel", for utility
19 production and a new consumer product or utility service. In addition, conservation
20 is treated in a revenue-requirements manner that is similar to a new supply side Rate
21 Base addition. This approach is very significant in the states that adhere to
22 traditional cost-of-service regulation and also rely on some type of integrated

1 planning regulation. Duke Energy Carolinas proposes to add about one-tenth of a
2 cent per KWH to customers' bills to recover these conservation-related revenue
3 requirements.

4 **Q. DO YOU AGREE WITH DR. NICHOLS' VIEW OF THE ROLE OF COST-**
5 **OF-SERVICE REGULATION AS IT PERTAINS TO ENERGY**
6 **EFFICIENCY?**

7 A. Most energy experts, including Dr. Nichols, recognize that energy efficiency
8 is a "value" service. This means it is often very cost effective for consumers and
9 society broadly to replace KWHs with energy efficiency. More than fifty years ago,
10 the United States largely adopted an approach to regulation known today as "Cost-
11 of-Service" (COS) regulation. The major reason, in my opinion, why COS
12 generally trumped Value-of-Service pricing was that COS could be more easily
13 quantified. As long as electric utilities build power stations and sell the KWH
14 produced, COS works relatively well and more stakeholders that take the time can
15 understand what it costs to produce and deliver electricity and make informed
16 judgments about the prices they pay.

17 When energy efficiency is introduced, "value" once again takes center stage.
18 Most regulators and many customers want to pursue energy efficiency. The
19 challenge for regulators is determining how to graft energy efficiency onto a
20 traditional build, own, and operate vertically integrated electric utility company,
21 which is akin to a hamburger joint selling tofu salad. The answer, if customers
22 demand a choice healthier than red meat, is to make energy efficiency a reasonably

1 priced alternative, using a value of service framework. Unlike Dr. Nichols, I
2 conclude that COS does not fit very well in terms of pricing energy efficiency due to
3 a myriad of issues, such as (1) the relationship between the marginal cost of
4 electricity and regulated prices; (2) the relationship between current and prospective
5 regulated prices and the cost of energy efficiency; (3) the lost revenue or lost margin
6 consequences for fixed cost recovery and authorized utility earnings (these are
7 sometimes combined using a generic word, decoupling); (4) the amount that energy
8 efficiency program participants pay relative to any contributions from or any cost
9 allocations to non-participating customers; and (5) external social benefits related to
10 energy efficiency.

11 This is where save-a-watt gets it right. This plan aligns the consumer
12 benefits along with strong shareholder support and incentives to utilize value of
13 service principles to expand energy efficiency onto cost-of-service regulation using
14 integrated resource planning, avoided cost, regulated revenue requirements and rate
15 riders. These combine into a balanced and transparent regulatory approach that was
16 designed to help Duke Energy Carolinas and its customers leap ahead of the pack
17 and make save-a-watt succeed, flourish, and be sustained after public interest wanes.

18 The crux of the save-a-watt plan is regulatory approval of its future
19 investments and conservation efforts, and an opportunity to earn a return “on” and
20 “of” these choices. Traditional hard (*i.e.* steel-in-the-ground generating stations)
21 would be granted their normal rate base cost recovery status (*i.e.* a return “on” and
22 “of” rate base investments and recovery of the unit’s full effects of fuel and

1 operating expenses). Under the save-a-watt plan, conservation would be granted, in
2 effect, a fifth fuel status. This means the two solutions (new generation and
3 conservation) to meeting Duke Energy Carolinas' customers' energy needs would
4 treat shareholders similarly and regulated revenue requirements would be less. In
5 this manner, Duke Energy Carolinas avoids past difficulties related to lost revenue
6 and non-participants because conservation is an input, not a product.

7 The save-a-watt plan keeps it simple and aligns interests. This synergy is
8 what makes the save-a-watt plan work. It also makes this most recent utility effort
9 to promote a greener future much more likely to succeed than past attempts. Duke
10 Energy Carolinas also proposes regulatory pre-approval of flexibility and
11 innovation. This would mean that Duke Energy Carolinas would put its resources
12 where they are more likely to achieve Energy Efficiency cost effectively. Since
13 Duke Energy Carolinas also proposes a true up based upon its actual versus
14 projected MW and MWH savings, there are strong incentives for Duke Energy
15 Carolinas to succeed and, at the same time, protections for customers if the company
16 does not.

17 **Q. DR. NICHOLS ARGUES ON PAGE 5 OF HIS DIRECT TESTIMONY**
18 **THAT DUKE ENERGY CAROLINAS' PROPOSAL DOES NOT**
19 **INCREASE THE COMPANY'S RISK OF RECOVERING ITS COSTS. DO**
20 **YOU AGREE WITH HIS CONCLUSION?**

21 **A.** No, I do not agree with Dr. Nichols. The energy efficiency rider that the Company
22 has proposed is intended to cover the program costs and provide an opportunity for

1 earning a return from conservation and load management activities. However, the
2 revenue is not guaranteed. In addition, there are significant additional costs that
3 Duke Energy Carolinas would incur that exceed the so-called "direct" or program
4 costs. Retail customers could benefit today if they invested in cost effective
5 alternatives that would reduce their electricity use. Many do not do so. Duke
6 Energy Carolinas faces very real packaging, marketing, information, and sales costs
7 to launch a new, massive and sustained energy efficiency business.

8 The amount of money that the Company collects under the energy efficiency
9 rider depends on the independently monitored and verified success of the programs,
10 which are described in Attachment A to the Company's filing. The Company is
11 compensated when its energy efficiency programs succeed in reducing energy
12 consumption and it is able to keep costs low. There is no true up or ability for Duke
13 Energy Carolinas to call "mulligan" and recover money that it spends for programs
14 that do not work. As a result, I conclude that Duke Energy Carolinas is assuming
15 significant risk under its proposed Energy Efficiency Plan.

16 Q. **WHAT THEN ARE THE CUSTOMER BENEFITS OF THE COMPANY'S**
17 **PROPOSED ENERGY EFFICIENCY PLAN?**

18 A. Unlike Dr. Nichols, who thinks Duke Energy Carolinas would keep most of the
19 benefits, I believe that utility customers benefit in a variety of ways. This does not
20 mean, conservation is so good that no one should pay for it or even that no one
21 should earn a profit when they sell energy efficiency. As with most economic
22 choices, it comes down to a comparison of benefits and costs. In short, there are

1 various reasons for regulators to take steps to encourage more Energy Efficiency
2 that would benefit customers.

3 First, when the marginal cost of conservation or energy efficiency is less
4 than the marginal cost of energy, society is unambiguously better off when
5 conservation replaces traditional energy supply-side choices because fewer
6 resources would be spent to satisfy consumers' demand for energy.

7 Second, conservation and energy efficiency increase environmental and
8 national security benefits. This often means that consumers would be willing to pay
9 more for energy efficiency than they would to consume more energy.

10 Third, the increase in overall revenue requirements and cost of service for
11 growing utilities would be less due to the "90 percent" cost-of-service aspect of
12 Duke Energy Carolinas' save-a-watt plan. Simply put, the traditional supply-side
13 choices add more dollars to a utility's total annual revenue requirements.

14 Fourth, if a utility's load growth raised the average total cost of energy (*e.g.*
15 when marginal cost exceeds average costs), non-participating customers would pay
16 higher average energy prices because the average total costs per unit of energy sold
17 would increase. Up to a point, non-participants would benefit from the lower overall
18 increase in cost of service related to Energy Efficiency. Regardless, non-participant
19 support would increase if participants in the Energy Efficiency program were
20 required to achieve Energy Efficiency with their time and money. In fact, non-
21 participants' support for Energy Efficiency will be greater when participants
22 contribute to Energy Efficiency programs, marginal costs are increasing sharply, and

1 non-participants perceive relatively high external benefits related to Energy
2 Efficiency.

3 Fifth, customers participating in the various save-a-watt programs would use
4 less energy. The new bills of participating customers would likely decline because
5 the percent decline in their energy consumption would likely exceed the percentage
6 increase in prices after retail prices are increased to pay for the growth that energy
7 efficiency displaces. All of these are benefits that customers will see under Duke
8 Energy Carolinas' Energy Efficiency Plan.

9 **Q. IN HIS TESTIMONY, DR. NICHOLS IS CRITICAL OF WHAT HE**
10 **ASSUMES THE COMPANY'S PROFITS WOULD BE UNDER THE SAVE-**
11 **A-WATT PROPOSAL. HOW DO YOU RESPOND?**

12 A. I will divide my discussion of Dr. Nichols' views concerning Duke Energy
13 Carolinas' profits and financial incentives into two parts. Dr. Nichols seems to
14 recognize that there is some potential role for financial incentives. He seems to
15 prefer some type of lost revenue decoupling narrowly focused on lost earnings (he
16 calls this Net Lost Revenue) associated with energy efficiency. When he considers
17 financial incentives, he would cap it at ten percent of direct program costs.

18 First, I believe that Dr. Nichols' Exhibit 6, which lists eight utilities with
19 energy saving performance, is misleading. I have taken the information from Dr.
20 Nichols' Exhibit 6 and added information related to the relevant contemporaneous
21 regulations that he did not include as Table 1 below. This shows that all eight
22 utilities, which achieved annual incremental energy savings equal to at least one

percent of their annual sales, had financial incentives. Just the two California utilities in his Exhibit 6 had broad decoupling of lost revenue in 2005, which is the year he reports exceptional performance for these eight utilities. Also, none had lost margin adjustments in place in 2005. Even the two California decoupling examples are misleading because these adjustments use the very broad "weather" sensitive sales adjustment mechanism, and not the more focused lost margin or any other more focused lost revenue due to energy efficiency adjustment.

TABLE 1
Utilities That Have Achieved Annual Electric Energy Savings of One Percent

Utility	Energy Savings	Year(s)	Performance Incentives 2005	Revenue Decoupling 2005	Lost Margin Adjustment 2005
Connecticut (IOUs)	1.1%	2005	Yes	No	No
Interstate Power & Light	2.6%	2005	Yes	No	No
Massachusetts Electric	1.3%	2005	Yes	No	No
Minnesota Power Co.	1.9%	2005	Yes	No	No
San Diego Gas & Electric	2.0%	2005	Yes	Yes ¹	No
Southern California Edison	1.7%	2005	Yes	Yes ¹	No
Vermont Energy Efficiency Utility	1.0%	2005	Yes	N/M	N/M
Western Mass Electric Co.	≥ 1.0%	1991-2001	Yes	No	No ²

¹ The decoupling mechanisms in California were not limited to energy efficiency programs but were much broader programs covering wider aspects of the utilities' revenues in the aftermath of the California energy crisis, when the California Public Utilities Code was revised to include a clause to "ensure that errors in estimates of demand elasticity or sales do not result in material over or undercollections of the electrical corporations (Section 739.10).

² There currently is no Lost Margin Adjustment in Massachusetts. A lost revenue mechanism was in place in the early 1990s but was dropped in conjunction with industry restructuring in 1998 (see Kushler *et al* "Aligning Utility Interests with Energy Efficiency Objectives: A Review of Recent Efforts at Decoupling and Performance Incentives" (October 2006).

My first conclusion is that real direct financial incentives, not at best neutral decoupling, are necessary to incentivise vigorous utility energy efficiency programs as Dr. Nichols' top 8 sample dramatically helps to prove.

Q. WHAT DO YOU THINK ABOUT DR. NICHOLS' SPECIFIC PROPOSAL TO MARK-UP DIRECT COSTS BY NO MORE THAN 10 PERCENT AND

1 **TO LIMIT ANY FINANCIAL INCENTIVES TO TEN PERCENT OF**
2 **PROGRAM COSTS?**

3 A. I think Dr. Nichols proposed “ten percent” mark up should be rejected because it is
4 neither warranted nor adequate. The primary reason for rejecting his proposal to cap
5 energy efficiency earnings is that Duke Energy Carolinas’ proposal is predicated on
6 a new regulatory paradigm that produces significant benefits for consumers and
7 society. Save-a-watt also places significant risks on the Company along with
8 financial incentives to grow and sustain this new business. There are no guarantees
9 of success or returns in Duke Energy Carolinas’ proposal. Therefore, the
10 Commission should reject Dr. Nichols “ten percent” constraint.

11 In addition, the ten percent Dr. Nichols proposes is much less than the mark-
12 ups I have found in my research relative to the “costs of goods sold” for energy
13 efficiency and load management costs over time.

14 **Q. WHAT IS YOUR SECOND REACTION TO DR. NICHOLS’ DISCUSSION**
15 **OF DUKE ENERGY CAROLINAS’ POTENTIAL FOR PROFIT?**

16 A. There are several significant questions and doubts concerning Dr. Nichols’ analysis.
17 Dr. Nichols produced Exhibits 2 and 3 to show why he believes Duke Energy
18 Carolinas would earn profits based on program costs for load management and
19 conservation that he calculated. I have collected data for the top 200 electric utility
20 companies over the past 15 years from the data reported to the Energy Information
21 Administration (“EIA”) of the U.S. Department of Energy using Form EIA-861, and
22 I do not believe that Dr. Nichols has included all the costs that Duke Energy

1 Carolinas would incur, especially initially, as it must learn by doing and have the
2 flexibility to pursue services that work and to reduce ones that do not work as well.
3 I understand that Dr. Nichols prefers a more micro-managed regulatory system of
4 command and control for energy efficiency. I strongly oppose such an approach.
5 This is, indeed, one of the core precepts that lead me to favor the save-a-watt
6 approach Duke Energy Carolinas has proposed. The Duke Energy Carolinas'
7 proposal would be also focused on achieving actual, not just projected savings.
8 Duke Energy Carolinas assumes the risk of disallowance if it fails to achieve actual
9 savings. Accordingly, I strongly believe the Commission should grant Duke Energy
10 Carolinas flexibility and ignore Dr. Nichols' attempt to convince them to
11 micromanage the specific details and programs. If Dr. Nichols' advice is taken, in
12 my opinion, program costs would increase sharply on average as South Carolina
13 electric companies would have to do the required things on a scale and level
14 proscribed in regulations.

15 I also have read Duke Energy Carolinas' relevant response to data requests
16 WM 1-18, where Duke Energy Carolinas explains that the 1¢ to 2¢ utility program
17 costs that Dr. Nichols used in his Exhibits does not include the most costly national
18 low-income related energy efficiency programs. These estimates for the costs per
19 KWH saved are also too low based on my analysis in terms of direct program costs
20 plus retail margins as well as the other indirect costs.

21 More fundamentally, I find that Dr. Nichols does not either appreciate or
22 give sufficient weight to the inherent costs and challenges of initiating a for-profit

1 and at-risk energy efficiency business. There are, as I explained, significant
2 additional costs, uncertainty, and risks.

3 I do not think this is what Dr. Nichols had in mind when he set program
4 costs at 1¢ and 1.5¢ in his analysis. Regardless, I believe save-a-watt's design will
5 send incentives to the Company and its customers to increase energy efficiency in
6 South Carolina.

7 **Q. DR. NICHOLS ALSO APPARENTLY BELIEVES THAT DUKE ENERGY**
8 **CAROLINAS WILL NOT HAVE A FINANCIAL INCENTIVE TO PURSUE**
9 **EXTENSIVE ENERGY CONSERVATION UNDER THE COMPANY'S**
10 **PROPOSAL. DO YOU AGREE?**

11 **A.** No, I don't. Duke Energy Carolinas proposes a similar profit incentive for meeting
12 customers' demands, whether through generation resources or demand side
13 resources. The save-a-watt plan levels the playing field. Regulation is a balancing
14 act that needs to swing within a narrow band between "protecting regulated
15 customers" and "ensuring investors will continue to provide the financing necessary
16 to achieve least cost objectives." Regulators cannot reasonably expect to help
17 consumers over time if they ignore, or worse punish as Dr. Nichols' approach
18 would, investors in regulated utility companies. Prior demand-side regulatory plans
19 have also mostly failed to address how, under traditional regulation, the second
20 stakeholder group (utility investors) would either earn income or at least be made
21 whole.

1 The save-a-watt approach has built-in incentives to save more not less. One
2 way for Duke Energy Carolinas to do this is to incentivize the retail consumers that,
3 with information, could afford to become more efficient. If Duke Energy Carolinas
4 has reasonable incentives, such as save-a-watt, to cause some customers to pay a
5 portion of the direct costs of energy efficiency, Duke Energy Carolinas would likely
6 grow and expand its energy efficiency efforts at lower costs. This would mean that
7 what Dr. Nichols calls high-cost efficiency would actually become lower cost for the
8 Company if and when it convinces, as it should, participating customers to
9 contribute some of the costs for which they would benefit with lower monthly utility
10 bills.

11 I also disagree with Dr. Nichols' concerns that Duke Energy Carolinas will
12 simply, if left unfettered, spend its efforts on low-cost conservation efforts and
13 then may stop when it has eaten the "low-hanging fruit." This totally misses the
14 point of save-a-watt. It will use actual savings performance in the field, it must
15 beat ninety percent of avoided cost with no lost revenue neutrality and Duke
16 Energy Carolinas would take fully-at-risk positions, plus pay likely significant
17 start-up costs. If Duke Energy Carolinas is given the right incentives, which the
18 save-a-watt approach does in my opinion, then the Company will seek all avenues
19 to obtain increasing levels of energy efficiency – because Duke Energy Carolinas
20 will be paid for achieving actual energy efficiency results.

21 Duke Energy Carolinas seeks to let customers establish values and markets
22 plus incentives to guide save-a-watt's expansion. Duke Energy Carolinas has no

1 sense that it will only pursue a preset number of conservation programs and stop.
2 The crucial aspect is that Duke Energy Carolinas seeks a new business with a new
3 hybrid regulatory/customer choice paradigm.

4 **Q. IN SUMMARY OF YOUR REBUTTAL TO DR. NICHOLS' TESTIMONY,**
5 **WHY DO YOU BELIEVE THAT DUKE ENERGY CAROLINAS' SAVE-A-**
6 **WATT PLAN HAS THE POTENTIAL TO SUCCEED WHERE OTHERS**
7 **HAVE FAILED?**

8 A. Using simplicity as a guide, the save-a-watt plan shifts the focus of the internecine
9 customer battles between participants and non-participants with a simple pledge that
10 overall annual revenue requirements will be less. Duke Energy Carolinas reinforces
11 this pledge with the requirement in most of its Energy Efficiency programs that
12 participants should contribute time and money.

13 The save-a-watt plan also avoids the second major reason for past failure,
14 which has been the short shrift given utility earnings. The save-a-watt plan avoids
15 this obstacle by using avoided supply-side costs to establish Energy Efficiency
16 revenue and earnings. The save-a-watt plan uses 90 percent of avoided costs to
17 establish the revenue requirements associated with Energy Efficiency, which are
18 intended to cover program development and implementation costs, as well as
19 provide earnings for the shareholders.

20 Past utility-sponsored conservation plans mostly failed to overcome these
21 two obstacles. Regulation became mired in the details of tariffs and cost allocations.

22 Competing approaches were often made to seem very different as micro managing

1 strived for the illusory goal of perfection. Duke Energy Carolinas cleverly replaces
2 perfection with simplicity. This plan was designed to work, while avoiding many of
3 the past debates.

4 As Jim Rogers discusses in his testimony, Duke Energy recently received
5 the prestigious Advocacy Excellence Award from the Edison Electric Institute in
6 recognition of the Company's comprehensive advocacy program to promote
7 energy efficiency with customers and employees. I believe that Duke Energy
8 Carolinas' proposed utility conservation plan aligns customer and shareholder
9 interests. After approximately three decades of mostly failed regulatory attempts to
10 use utility tariffs, decoupling revenue and prices, and micro-managing what
11 customers might do, this innovative plan replaces all pretexts of shareholder
12 neutrality, or worse, losses, with an opportunity for shareholder earnings related to a
13 "greener" future.

14 **Q. TURNING NOW TO DR. ATKINS' TESTIMONY, HE ASSERTS THAT, IN**
15 **ESSENCE, THE EXISTING REGULATORY FRAMEWORK IN SOUTH**
16 **CAROLINA PROVIDES SUFFICIENT INCENTIVES FOR DUKE**
17 **ENERGY CAROLINAS TO PURSUE ENERGY EFFICIENCY AND THAT**
18 **THE COMMISSION SHOULD EXAMINE THE COMPANY'S RATES IN A**
19 **GENERAL RATE CASE PROCEEDING. FROM A REGULATORY**
20 **POLICY PERSPECTIVE, HOW DO YOU RESPOND TO DR. ATKINS**
21 **RECOMMENDATIONS?**

1 A. Dr. Atkins and I view both the past and current regulatory conditions quite
2 differently. For example, I think most consumers in South Carolina would
3 consider it a good thing that there has been no base rate case since 1991. This
4 means that Duke Energy Carolinas likely has changes that would trigger upward
5 cost of service revisions. Dr. Atkins and others propose that the company file a
6 new base rate case in order to put their stilted form of energy efficiency into new
7 tariffs. In doing so they focus on one cost component, the cost of capital or rate of
8 return, which they aver would be lower today than it was in 1991. I do not
9 necessarily agree. I do recognize that a new rate case would open up new claims
10 from all stakeholders and probably cause customer confusion and consternation.

11 Requiring a new rate case to implement a strong and sustainable energy
12 efficiency program should also be rejected. Such a requirement would potentially
13 punish or at least put the Company at significant financial risk when all new rate
14 case matters are thrown into a new, full-blown base rate case proceeding. This is
15 not and would not be viewed as a positive inducement or incentive for utilities to
16 design and propose innovative energy efficiency programs. Such an onerous
17 requirement would conflict directly with the need to provide utility incentives to
18 succeed.

19 I also believe that full-blown rate cases most likely would obscure the
20 purpose, details and incentives of new important initiatives such as energy
21 efficiency. Participants would consider the end-result of all changes and would be
22 free to individually assign up and down adjustments wherever they please. A rate

1 case is not the place to consider and approve an innovative new business model
2 for energy efficiency regulation, such as save-a-watt. Also, while I am not an
3 attorney, as a former state utility commissioner, I read the South Carolina Energy
4 Conservation and Efficiency Act of 1992 to clearly provide a mechanism to
5 provide financial incentives outside of a rate case for the Commission to adopt
6 procedures to encourage utilities to pursue energy efficiency, such as Duke Energy
7 Carolinas has requested here.

8 **Q. YOU IMPLIED THAT YOU ALSO DISAGREED WITH DR. ATKINS'**
9 **VIEWS ABOUT ENERGY EFFICIENCY REGULATION. WOULD YOU**
10 **EXPLAIN WHY?**

11 **A.** The nation is increasingly seeking to solve the twin problems of climate change and
12 energy/economic security. The nation's electric industry is increasingly being
13 targeted to play a major role in expanding the nation's commitment to energy
14 efficiency.

15 The first policy question may be: "Why is this necessary?" The answer boils
16 down to two components. First, retail consumers, at best, would compare retail
17 electric prices to the marginal cost of energy efficiency. This would be too narrow a
18 focus because when the margin cost of energy is increasing as it is today, current
19 retail prices represent too soft a signal. Furthermore, the external costs of energy
20 use and production are not fully reflected in the retail customer's price of electricity
21 to cost of energy efficiency comparisons. There are likely scale economies involved
22 in energy efficiency information gathering and analyses, installation, and

1 purchasing/marketing. The utility, not its individual customers, seems to be better
2 placed to capture such cost effective advantages.

3 This causes regulators to take charge and in various ways to mandate utility-
4 sponsored energy efficiency. Increasingly, we are reminded that the nation tried this
5 at least twice before in response to previous energy crises and increase in
6 environmental awareness. This time, regulators are seeking to find out what works
7 and how to sustain new efforts. This is where I start to strongly disagree with Dr.
8 Atkins' views on energy efficiency.

9 More seems to be needed from regulation than simply permitting electric
10 utilities to pass on the costs of conservation to their mostly captive retail customers,
11 especially if the first step is to assume the risk of a new rate case. Most states permit
12 cost recovery for mandated utility-sponsored energy efficiency programs. In the
13 past, this limited regulatory approach has failed to sustain energy efficiency when
14 either energy prices stabilized or other public concerns replaced energy and
15 environmental challenges. This is why financial incentives are growing around the
16 nation.

17 The goal of save-a-watt is to create utility business opportunities that meld
18 light- handed regulation and utility financial incentives to promote and sustain
19 energy efficiency sales to regulated customers. The states that are doing this are
20 spending more on energy efficiency and as a result saving more energy and reducing
21 the monthly bills of customers that participate.

1 Increasingly, regulators are adopting or considering financial incentives to
2 complement cost recovery in their efforts to expand the use of energy efficiency.
3 Some states couple these renewed efforts with integrated resource planning. This is
4 particularly likely if a state finds a need to expand electric generating capacity and
5 marginal electricity costs are increasing. Dr. Atkins seems to be wedded to the past.
6 I believe save-a-watt is a major improvement that the Commission should approve,

7 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

8 **A. Yes, it does.**

CHARLES J. CICHETTI

PROFESSIONAL EXPERIENCE

1996-present	Co-Founder, Pacific Economics Group, Pasadena, Ca and Madison, WI.
2006-present	Adjunct Professor, University of Southern California
1998-2006	Jeffrey J. Miller Professor in Government, Business, and the Economy, University of Southern California;
1990-1997	Adjunct Professor of Economics, University of Southern California;
1992-1996	Managing Director, Arthur Andersen Economic Consulting;
1991-1992	Co-Chairman, Putnam, Hayes & Bartlett, Inc.;
1988-1991	Managing Director, Putnam, Hayes & Bartlett, Inc.;
1987-1990	Deputy Director, Energy and Environmental Policy Center, John F. Kennedy School of Government, Harvard University;
1984-1987	Senior Vice President, National Economic Research Associates;
1980-1984	Co-Founder and Partner, Madison Consulting Group;
1979-1986	Professor of Economics and Environmental Studies, University of Wisconsin-Madison;
1977-1979	Chairman, Public Service Commission of Wisconsin, Appointed by Governor Patrick J. Lucey (member until 1980);
1975-1976	Director, Wisconsin Energy Office and Special Energy Counselor for Governor Patrick J. Lucey, State of Wisconsin;
1974-1979	Associate Professor, Economics and Environmental Studies, University of Wisconsin-Madison;
1972-1974	Visiting Associate Professor, Economics and Environmental Studies, University of Wisconsin-Madison;
1972	Associate Lecturer, School of Natural Resources of the University of Michigan;
1969-1972	Resources for the Future, Washington, D.C.;
1969	Ph.D., Economics, Rutgers University;
1968-1969	Instructor, Rutgers University;
1965	B.A., Economics, Colorado College;
1961-1964	Attended United States Air Force Academy.

EDITORIAL AND ADVISORY BOARDS

Journal of Environmental Economics and Management, Former Member
Energy Systems and Policy, Former Member;
Land Economics, Former Editor.

Faculty Advisor to Campus Republicans at USC, 2002 to 2005
Alliance for Energy Security; Former Member;
Association of Environmental and Resource Economics, Former Executive Committee, Former Member;
California ISO Market Advisory Group –Former Member appointed by Governor Gray Davis;
Center for Public Policy Advisory Committee, Former Member;
Department of Energy, Fuel Oil Marketing Advisory Committee, Former Member;
Graduate School of Public Policy at the University of California, Berkeley; Former Board Member;
Institute for the Study of Regulation;
National Association of Regulatory Utility Commissioners, Executive Committee and Chairman of the Ad Hoc Committee on the National Energy Act, Former Member;
Public Interest Economics Center, Board of Directors, Former Member;
Rutgers University, Energy Research Advisory Board;
U.S. Chamber of Commerce Energy and Natural Resources Committee, Former Member.

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